(No Model.)

C. A. THOMPSON.

OILER.

No. 304,874. Patented Sept. 9, 1884.

FIG. 1.

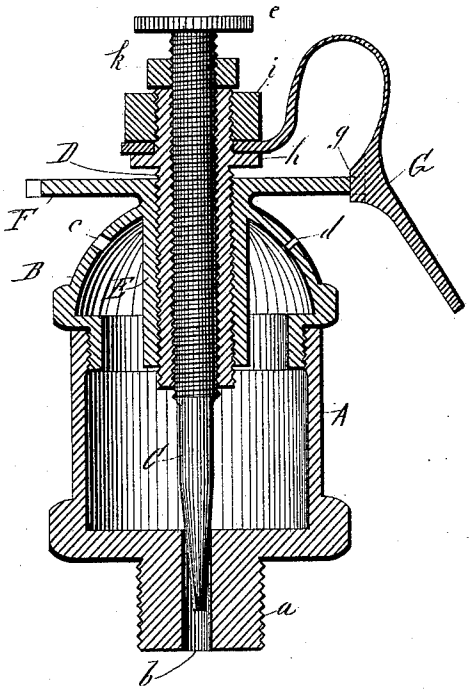


FIG. 2.

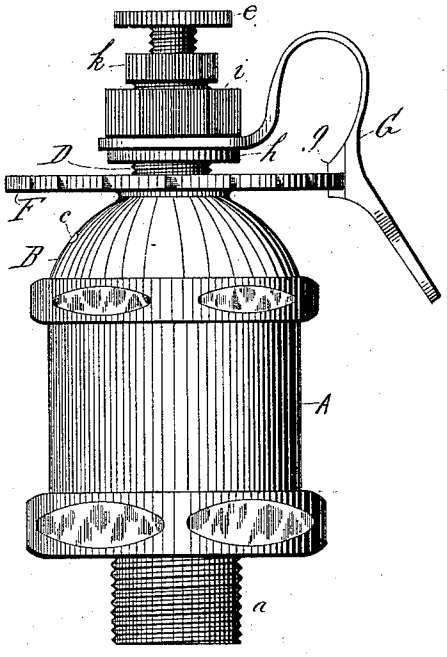


FIG. 3.

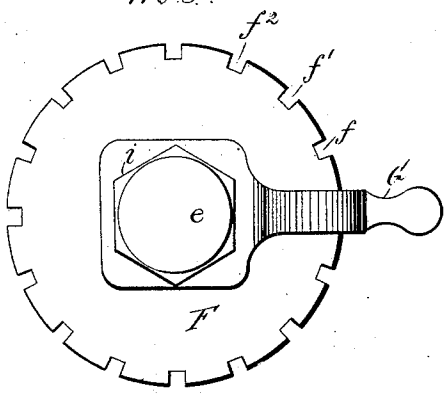
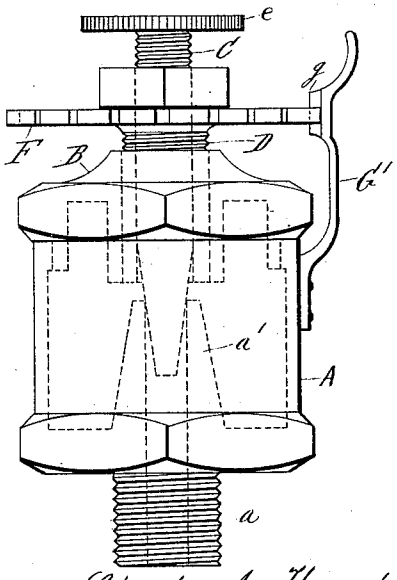


FIG. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES A. THOMPSON, OF FLUSHING, NEW YORK.

OILER.

SPECIFICATION forming part of Letters Patent No. 304,874, dated September 9, 1884.

Application filed August 1, 1884. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. THOMPSON, of Flushing, county of Queens, and State of New York, have invented certain new and useful Improvements in Oilers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention has relation to that class of devices intended to be applied upon or in connection with journals or bearings, or in other situations, for the purpose of supplying oil or lubricating material to the moving parts of machinery, which devices are ordinarily known as "oilers" or "oil-cups."

The object of my invention is to produce a simple, cheap, durable, and efficient oiler or oil-cup of the class above named, wherein the flow of lubricating material from the oiler or cup may be easily and quickly arrested, or easily and quickly regulated within any desired degree, and the regulated mechanism fixed at the point to which adjusted, so that the flow of lubricating material will be constant or uniform while the device remains so set. To accomplish this my improvements involve certain novel and useful peculiarities of construction, relative arrangements or combinations of parts, and principles of operation, all of which will be herein first fully described, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a vertical section and elevation on a plane passing through the axis of the device. Fig. 2 is a side elevation or exterior view, and Fig. 3 a top or plan view, of the device. Fig. 4 is a side elevation or exterior view of an oiler or oil-cup also constructed in accordance with my invention and involving the principles thereof, showing the notched disk applied in connection with the adjusting-screw, or made movable, instead of upon the top of the oiler and stationary, as in Figs. 1 and 2.

In all these figures like letters of reference, wherever they occur, indicate corresponding parts.

A is the main shell or reservoir, which may be of any size or shape, and arranged to be fixed in position, as by use of the threaded neck *a* at the bottom, or otherwise, as may be desired. The supply of lubricating material is contained in this reservoir and discharged therefrom through a perforation, as *b*.

B is the cover or top of the reservoir, the same being supplied with a feeding or inlet orifice, *c*, and an air-vent, as *d*, as is usual in such devices.

C is a plug or valve arranged to close the escape-aperture *b*, or to govern the size of the escape-passage, and thereby regulate the quantity of liquid which may flow therethrough. For this reason or purpose this plug or valve is preferably made slightly conical at bottom, and when completely closed or seated it bears upon the walls of orifice *b*. The plug C is threaded at its upper extremity, passes through to the exterior of the oiler, is provided at top with a thumb-piece, *e*, or other means of turning it, and is seated in a hollow adjustable threaded section, D, which in turn is made adjustable up and down within the cover B, or within the internally-threaded neck E, affixed to or forming part of said cover.

F is a gage-disk, provided on its circumference with a series of notches (represented at $f f' f^2$, &c.) at about equal or other predetermined distances from each other; and *g* is a detent arranged to enter any one of these notches.

It is apparent that the disk might be provided with any other form of stop and the detent correspondingly constructed.

In Figs. 1, 2, and 3 the tubular threaded section or thimble D is shown as being made to revolve through the medium of a handle, G, connected therewith, as by means of a ledge, *h*, and nut *i*. This handle G is in the form of a spring, and carries the detent *g*, so that in order to release the detent from engagement with the disk F it will be necessary to overcome the force of the spring. Then, if the handle G be turned, it will cause the thimble D to revolve and move up or down within its threaded seat, and the thimble carries the valve with it. The parts being arranged as in Fig. 1, the detent *g* enters any one of the notches which may be decided upon for the zero or initial notch. The valve C is then turned down by means of the thumb-piece *e* until the orifice *b* is completely closed, when the valve-stem is connected with or made immovable with re-

spect to the section D by means of a jam-nut, *k*, which rides upon the threaded stem of the valve. The parts being thus adjusted, by turning the handle G so that its detent shall enter the first, second, third, or any other notch on the disk, the valve will be opened to the required degree, and thus the lubricating-liquid regulated with respect to its flow. If the flow be not sufficiently rapid, the valve may be further opened, or, if too rapid, it may be further closed, and this to any desired degree, as will be readily understood.

In Fig. 4 the disk F is affixed to the hollow section D, and the detent *g* is carried by a spring, G′, affixed to some convenient part of the oiler. In this form the section D is revolved and the valve adjusted up and down by application of the hand to the disk F, which may be turned from the zero-point, so as to bring any other notch in engagement with the detent. The two arrangements are alike in principle, and only differ in immaterial details of construction.

The improved device affords a ready means of indicating to the operator the rapidity with which the oil is being fed, and a like ready means of regulating the flow, and thus best governing the supply, both in respect to the matter of economy (preventing waste) and the requirements of the machinery to which the device may be applied. When a number of the improved oilers are applied to any one set of machinery, they may all be adjusted to feed with like rapidity, or otherwise, as circumstances may require, and they may be quickly adjusted to correspond with the varying rapidity of the movements of the machinery. The disk F projects over the feed-opening *c* and air-vent *d*, and thus serves as a guard against the admission of dust or other foreign matter to the interior of the oil-chamber. The formation of the valve-seat is immaterial, as is also the construction of the interior of the oil-reservoir. For ordinary use I make the bottom of the oil-reservoir plain, or substantially so.

When the device is intended for use upon connecting-rods—as on locomotives, &c.—the bottom is formed substantially as indicated by the dotted lines in Fig. 4, wherein the inwardly-projecting neck *a*′ is employed for the purpose of obviating the disadvantages due to the continuous churning of the oil within the oil-receptacle.

When constructed and arranged substantially in accordance with the foregoing explanations, the improved device is found in practice to admirably answer the purpose or object of the invention as previously set forth. The valve, being once closed or set to the required height, is in no danger of being accidentally disarranged.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an oiler of the character herein set forth, the valve or plug, means for adjusting the same, a gage-disk, and a detent operating in conjunction with said disk, and arranged to hold the valve at any point to which it may be adjusted, these parts being combined substantially as and for the purposes set forth.

2. In an oiler of the character herein set forth, the combination, with the threaded shell or thimble, of the threaded valve passing through said thimble, and made movable therewith, substantially as and for the purposes set forth.

3. In an oiler of the character herein set forth, the threaded thimble, the threaded valve-stem mounted therein, a jam-nut for connecting the thimble and valve-stem, and means for revolving the two connected parts, combined and arranged substantially as shown and described.

4. The herein-described oiler, composed of the oil-receptacle having a discharge-orifice, a valve for governing said orifice, the threaded valve-stem, movable threaded section or thimble, projecting gage-disk, and detent, all arranged substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

CHARLES A. THOMPSON.

Witnesses:

J. F. DORSETT,

CLIFFORD A. SMITH.